

CLAIMS

1. A lock mechanism for use with a component to be locked by the mechanism and which is securable to the lock mechanism or is releasable therefrom, which lock mechanism comprises:

5 – a housing having a bore in which is slidably received a retaining member movable between a first position where the retaining member may be engaged with said component and a second position where the retaining member is disposed deeper in the bore and cannot be disengaged from said component;

10 – a catch member movable between active and inactive positions, the catch member being in its inactive position when the retaining member is in its first position but on moving the retaining member to its second position the catch member moves to its active position engaged with the retaining member to hold the retaining member in its second position, until the catch member is moved back to its inactive position again to free the retaining member for 15 movement to its first position;

– an auxiliary lock for the retaining member which auxiliary lock is operable to hold the retaining member in its second position irrespective of operation of the catch member to its inactive position;

20 – an indicator for indicating the locking condition of the mechanism and having at least two indicating states; and

– an electronic control unit driving the indicator, the catch member controlling an input to the control unit to indicate when the catch member is in its active position, and the control unit being responsive to an external signal to effect sealing of the lock mechanism and to operate the auxiliary lock, whereby 25 a first indicating state of the indicator may show whether sealing of the lock mechanism is intact and a second indicating state may show whether an attempt has been made to release the lock mechanism since the lock mechanism was last sealed.

2. A lock mechanism as claimed in claim 1, wherein the auxiliary lock 30 includes a bolt having locked and free positions, the bolt in its locked position engaging the retaining member to prevent movement thereof from its second

position and the bolt when in its free position permitting the retaining member to move to or from its first position.

3. A lock mechanism as claimed in claim 2, wherein the bolt is in the form of a plate slidably mounted in the housing and having an aperture through which the retaining member passes, the plate when in its locked position being engaged in a recess formed in the retaining member.

4. A lock mechanism as claimed in claim 2, wherein the bolt is in the form of a plunger mounted within the housing and when in its locked position engaging a circumferential groove formed in the retaining member.

10. 5. A lock mechanism as claimed in any of claims 2 to 4, wherein a power-driven actuator is provided to cause movement of the bolt between its said positions, the operation of the actuator being controlled by the control unit.

15. 6. A lock mechanism as claimed in claim 5, wherein sealing of the lock mechanism causes the bolt to be moved to its locked position to prevent subsequent movement of the retaining member to its first position until the lock mechanism has been unsealed.

20. 7. A lock mechanism as claimed in any of the preceding claims, wherein the indicator has a third indicating state corresponding to the retaining member being in its second position and the catch member in its active position, but the auxiliary lock has not been operated to hold the retaining member in its second position.

25. 8. A lock mechanism as claimed in claim 7, wherein the indicator has a fourth indicating state corresponding to movement of the catch member to its inactive position following sealing of the lock mechanism by the auxiliary lock, whereby the retaining member is not freed to move to its first position.

9. A lock mechanism as claimed in any of the preceding claims, wherein the indicator has at least two indicator lights the illumination whereof is controlled by the control unit.

30. 10. A lock mechanism as claimed in any of the preceding claims, wherein the control unit includes a card reader for reading information carried on a card, whereby sealing of the lock mechanism may be performed by a person in possession of a suitable card.

11. A lock mechanism as claimed in claim 10, wherein the control unit is arranged to permit initial sealing of the mechanism by a first card carrying appropriate information, and resealing by a second card carrying appropriate but different information.
- 5 12. A lock mechanism as claimed in any of the preceding claims, wherein the control unit includes a receiver for electromagnetic waves of a defined frequency whereby sealing of the lock mechanism may be performed remotely by a suitably tuned transmitter transmitting waves appropriately encoded to perform sealing of the lock mechanism.
- 10 13. A lock mechanism as claimed in any of the preceding claims, wherein said component is in the form of a flexible cable having at one end an enlarged head engageable with the retaining member.
14. A lock mechanism as claimed in any of the preceding claims, wherein the retaining member is in the form of a U-shaped shackle one end of which is free of the housing when the retaining member is in its first position, said one end being received in a further bore in the housing when the retaining member is in its second position.
- 15 15. A lock mechanism as claimed in any of the preceding claims, wherein the retaining member has an intermediate portion of reduced cross section and which remains in the bore in the housing when the retaining member is in its first position, the catch member being slidably mounted in a bore extending transversely to and partially intersecting the bore in which the retaining member is received, the catch member having large and small diameter parts which when aligned with the retaining member bore correspond respectively to the active and inactive positions of the catch member.
- 20 16. A lock member as claimed in claim 15, wherein the catch member is spring-urged to its active position.
- 25 17. A lock mechanism as claimed in any of the preceding claims and including an electrical switch operable on movement of the catch member between its two positions and connected to the control unit to furnish said input thereto.

- 18 -

18. The combination of a lock mechanism as claimed in any of the preceding claims and a goods compartment having an access opening provided with a door to close that opening, wherein the retaining member may be engaged with a component associated with the compartment door, thereafter to prevent
5 opening of the door.